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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SÖREN HOFMAYER,
VIACHESLAV ZHOLUDEV, IJAD MADISCH,
HORST FICKENSCHER, MICHAEL HAEUSLER,
and ALEX TOLKE

Appeal 2017-008263
Application 14/796,894
Technology Center 2400

Before ELENi MANTIS-MERCADER, ERIC S. FRAHM, and
DENISE M. POTHIER, *Administrative Patent Judges*.

FRAHM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1 and 3–21. Claim 2 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellants disclose and claim a system and method for processing (i) academic articles as content from users and storing the content in a database along with user profiles and feedback receive from the users (e.g., a comment on an article), and (ii) computing reputation rankings for the user profiles based on the feedback (Spec. ¶¶ 1–5; Abstract (*see* claims 1 and 16)). Independent claim 1, reproduced below with emphases added, is illustrative of the claimed subject matter:

1. A method comprising:

receiving content from a plurality of academic users and storing the content in a database in association with a plurality of respective academic user profiles, the content comprising academic articles authored by the users;

receiving feedback from at least some of the users on the academic articles associated with the user profiles of other users and storing the feedback in the database in association with the respective user profiles of the authors of the academic articles, the feedback comprising at least one of a comment on, a citation to, or a copy from one of the articles, and using a processor, executing a series of instructions stored in a tangible, non-transitory computer memory, the instructions causing the processor to compute reputation rankings for the user profiles based at least in part on the feedback, weighted based on at least one of the reputation ranking, credentials, publication volume, or user activity of the respective user from whom the feedback was received.

REFERENCES and REJECTIONS

The Examiner made the following rejections:

(1) Claims 1 and 3–21 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Final Act. 2–3; Ans. 3–5. Specifically, the Examiner determines the claims are directed to the abstract idea of determining reputation rankings for academic user profiles based on user feedback, which constitutes the organization of human activity and relationships in the academic field, and the additional claimed elements in the claims are instructions to implement the idea on a computer. Final Act. 2–3; Ans. 2–5.

(2) Claims 1 and 3–21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Work et al. (US 8,010,460 B2; issued Aug. 30, 2011, hereinafter “Work”).¹ Final Act. 3–9; Ans. 5–7.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

We rely on the Examiner’s factual findings and reasoning stated in the Final Rejection (mailed May 5, 2016, “Final Act.”) 2–9 and Answer (mailed

¹ The Examiner rejects the claims of the instant application under 35 U.S.C. § 102(b). Final Act. 3. We note the instant application was filed on July 10, 2015, and has a continuation priority filing date of June 26, 2012. *See* Amendment to Specification filed on July 10, 2015. Based on Work’s issue date of August 30, 2011, Work is available as prior art under 35 U.S.C. § 102(e), but not 35 U.S.C. § 102(b), since Work’s issue date predates the instant application’s continuation filing date by less than a year. As neither party has addressed this issue, we consider this to be harmless error, and consider the rejection as having been made under 35 U.S.C. § 102(e), and not 35 U.S.C. § 102(b).

Mar. 10, 2017 “Ans.”) 2–7. Additional findings of fact and reasoning may appear in the Analysis below.

ANALYSIS

35 U.S.C. § 101 Non-Statutory Subject Matter

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S.Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts” (*id.*), e.g., to an abstract idea. For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If the claims are not directed to a patent-ineligible concept, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* at 2355 (quoting *Mayo*,

566 U.S. at 78–9). For claims to pass muster, “at step two, an inventive concept must be evident in the claims.” *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

The Court acknowledged in *Mayo* that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that in itself is the abstract idea and merely invoke generic processes and machinery.

Alice Step One

According to *Alice* step one, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Alice*, 134 S.Ct. at 2355. Merely combining several abstract ideas (such as the organization of human activity in a specific field, like academic peer review, mathematical algorithms, and/or a fundamental business practice) does not render the combination any less abstract. *RecogniCorp*, 855 F.3d at 1327 (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas.). We have considered all of Appellants’ arguments (App. Br. 6–11; Reply Br. 2–3), but find them unpersuasive as to error in the rejection.

With regard to the rejection under 35 U.S.C. § 101, Appellants argue claims 1 and 16 (App. Br. 6–11). Claims 1 and 16 each contain similar subject matter, namely (i) processing academic articles as content from users and storing the content in a database along with user profiles and feedback

receive from the users (e.g., a comment on an article), and (ii) computing reputation rankings for the user profiles based on the feedback. We select independent claim 1 as the representative claim for this group, and will address Appellants' arguments with respect thereto. 37 C.F.R. § 41.37(c)(1)(iv).

Although the independent claims each broadly fall within the statutory categories of patentability, the Examiner concludes the claims are still patent ineligible because they are directed to a judicially-recognized exception—i.e., an abstract idea or combination of abstract ideas. Final Act. 3–4; Ans. 2–5. In particular, the Examiner concludes the claims are directed to the abstract ideas of: (i) “determining reputation rankings for academic user profiles based on user feedbacks which is an example of organizing human activities and relationships” (Final Act. 2); (ii) data transmission and collection along with the calculation of a mathematical algorithm to determine a result and determine a rank based on the result (Ans. 2–3); and (iii) “performing fundamental commercial practices more efficiently” (Ans. 5), such as “improving academic peer reviews by implementing a ranking system using feedback” (Ans. 4). The Examiner also concludes the determination of reputation rankings using human interactive platforms as claimed is performed by “generic hardware elements” that “would be routine in any computer implementation” (Final Act. 3); therefore the claims amount to nothing more than the abstract idea itself and are implemented using generic computer parts or generic computer system. Final Act. 3; *see also* Ans. 4. We agree with the Examiner and add the following.

Instead of using a definition of an abstract idea, “the decisional mechanism courts now apply is to examine earlier cases in which a similar

or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)); accord United States Patent and Trademark Office, July 2015 Update: Subject Matter Eligibility 3 (July 30, 2015), <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf> (instructing Examiners that “a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea.”) As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs. of Texas, LLC v. DirecTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016).

Our reviewing court has said that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power*, 830 F.3d at 1353. Similarly, “collecting, displaying, and manipulating data” is an abstract idea. *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017).

At least the following decisions from our reviewing court have found many similar types of fundamental commercial practices patent ineligible: *American Needle, Inc. v. Zazzle Inc.*, 2016 WL 6647774 (Fed. Cir. 2016) (mem.) (affirming the district court’s holding that showing merchandise to

potential customers is patent ineligible.); *Cyberfone Sys., LLC v. CNN Interactive Grp.*, 558 Fed. Appx. 988 (Fed. Cir. 2014) (affirming the district court’s holding that using categories to organize, store, and transmit information is well-established and the idea of collecting information and then separating and transmitting that information according to its classification is patent ineligible.); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343 (Fed. Cir. 2014)(cert. denied, 136 S.Ct. 119 (2015) (data collection, recognition, and storage is undisputedly well-known and collecting data, recognizing certain data within the collected data set, and storing that recognized data in a memory is patent ineligible.); *Concaten, Inc. AmeriTrak Fleet Solutions, LLC*, 2016 WL 5899749 (Fed. Cir. 2016) (mem.) (cert. denied), 2017 WL 1001313 (2017) (receiving, processing, and transmitting data is patent ineligible.); *Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) (holding that collecting information, analyzing it, and displaying certain results of the collection and analysis is patent ineligible.). In this light, Appellants’ method of determining reputation rankings for academic user profiles based on user feedback recited in claim 1 on appeal is the organization of human activity, and a commercial practice that is economic and fundamental in nature.

Our reviewing court has also held that “analyzing information by steps people [can] go through in their minds, or by mathematical algorithms, without more [are] mental processes within the abstract-idea category.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146 (Fed. Cir. 2016). At least the following decisions from our reviewing court have found a process of operating on information using mathematical

formulas/correlations patent ineligible: *Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014) (process of organizing information through mathematical correlations.); *Digitech Information Systems, Inc. v. BMW Auto Leasing, LLC*, 504 F. App'x 920 (mem.)(Fed. Cir. 2013) (rendering a decision based on data and mathematical formulas.).

Appellants' contention (App. Br. 8–10) that the claims are not abstract because they recite using a specific type of feedback, feedback based about “academic articles associated with the user profiles” consisting of “a comment” as recited in claim 1, is not persuasive inasmuch as feedback consisting of comments still falls within the abstract idea of organizing human activities and relationships that may improve academic peer reviews.

Appellants' contentions that the claims are drawn to (i) “a specific computer-implemented technique” (App. Br. 8) and (ii) an improvement over prior-art computer technology, similar to the claims in *DDR Holdings* (App. Br. 10–11) are also unpersuasive. Appellants misconstrue *DDR Holdings*. In *DDR Holdings*, the court held that a claim may amount to more than any abstract idea recited in the claims when it addresses and solves problems *only* encountered with computer technology and online transactions, e.g., by providing (serving) a composite web page rather than adhering to the routine, conventional functioning of Internet hyperlink protocol. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014). In contrast, claim 1 performs a process that collects, stores, analyzes, and manipulates information (i.e., feedback including comments about academic articles) to compute a reputation ranking using a conventional computer. *See* Final Ans. 2–3; Spec. ¶¶ 1, 5–7,

21–27; *cf.* App. Br. 8–11; and Reply Br. 2–3. The collection (i.e., receiving content and feedback), analysis, and manipulation of academic content and comments/feedback (i.e., data) to produce rankings are not technical problems as discussed in *DDR*; rather, they are ranking and/or efficiency problems (e.g., whether certain comments for articles associated with certain user profiles meets certain criteria). Computing reputation rankings for user profiles based on feedback consisting of comments is a commercial solution to the ranking/efficiency problem in the academic field, not a technical solution. This commercial solution may be assisted by using a general purpose computer to perform the data collection, analysis, and manipulation processes, but does not arise specifically in the realm of computer networking or improve how the computer itself functions. As we previously explained, the instant claims are more akin to the claims for analyzing information found to be abstract in *OIP Techs.*, 788 F.3d at 1363 or *Elec. Power*, 830 F.3d at 1353.

In view of the foregoing, we conclude that claim 1 recites an abstract idea or a combination of abstract ideas. More specifically, we conclude that the method for receiving content and feedback, storing content in a database, and using a processor to compute rankings recited in independent claim 1, are fundamental business practices employing mathematical algorithms, as well as the organization of human activity in the academic peer review field, and, therefore constitute patent-ineligible subject matter. *See Alice*, 134 S.Ct. at 2357; *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (“[F]undamental economic and conventional business practices are often found to be abstract ideas, even if performed on a computer.”)

Alice Step Two

The Examiner also concludes, and we agree, claim 1 does not include limitations that are “significantly more” than the abstract idea because the claims do not include an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. *See* Final Act. 3; Ans. 4–5. Here, we agree with the Examiner that the additional limitations, separately, or as an ordered combination, do not provide meaningful limitations (i.e., do not add significantly more) to transform the abstract idea into a patent eligible application. *Id.*

We agree with the Examiner that the additional limitations, separately, or as an ordered combination, do not provide meaningful limitations (i.e., do not add significantly more) to transform the abstract idea into a patent eligible application. *See e.g.*, Final Act. 3; Ans. 4–5. Indeed, the claims merely recite processes for receiving content and feedback, storing content in a database, and using a processor to compute rankings (i.e., mathematical operations). Such steps are routine, conventional, and well-understood computer functions (i.e., mathematical operations) of a general processor. The Specification supports this view in discussing the processes implemented in software, which operates on generic computers to perform the recited data manipulation steps. *See* Spec. ¶¶ 21–27; *see also* Ans. 4–5 (citing Spec. ¶ 20). “[T]he use of generic computer elements like a microprocessor” to perform conventional computer functions “do not alone transform an otherwise abstract idea into patent-eligible subject matter.”

FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings*, 773 F.3d at 1256).

Summary

In view of the foregoing, we are not persuaded of Examiner error and we sustain the Examiner's rejection under 35 U.S.C. § 101 of representative claim 1, as well as claims 3–21 grouped therewith.

35 U.S.C. § 102

With regard to the anticipation rejection, Appellants argue claims 1 and 3–21 as a group, primarily arguing independent claims 1 and 16 (App. Br. 12–14). Claims 1 and 16 each contain similar subject matter, namely processing academic articles as content from users and storing the content in a database along with user profiles and feedback receive from the users (e.g., a comment on an article), and (ii) computing reputation rankings for the user profiles based on the feedback. We select independent claim 1 as the representative claim for this group, and will address Appellants' arguments with respect thereto. 37 C.F.R. § 41.37(c)(1)(iv).

We agree with the Examiner (Final Act. 3–4; Ans. 5–7) that Work discloses the disputed limitations of (i) “receiving content from a plurality of academic users and storing the content in a database in association with a plurality of respective academic user profiles, the content comprising academic articles authored by the users” (claim 1); and (ii) receiving feedback that is equivalent to the recited “comments” required by claim 1. The Examiner cites column 9, lines 18–24 of Work as meeting limitation (i) above (*see* Ans. 5–6), and column 19, line 19 of Work which discloses “evaluations” or endorsements as meeting the “comment”

limitation of claims 1 and 16 (*see* Ans. 6). Work discloses “stor[ing] reference information along with actual evaluations and endorsements in electronic database 42 to be associated with users’ profiles and resumes” (Work col. 9, ll. 18–21). Work further discloses that “[t]hese stored references and endorsements may be used so as to enhance the ability of searchers to find targets who not only appear to match their search requirements, but who have also received positive endorsements by others” (*id.* at col. 9, ll. 21–24), similar to Appellants disclosed and claimed invention (*see* Spec. ¶ 1 (*see* claims 1, 16)). Appellants have not rebutted these findings in the Reply Brief, either by way of evidence or argument, or otherwise shown these findings to be in error.²

In view of the foregoing, Appellants’ argument that Work fails to disclose all of the limitations of claims 1 and 16 (App. Br. 12–14), are not persuasive. Appellants’ arguments have not shown error in the Examiner’s factual findings related to the anticipation rejection of claims 1 and 16, or remaining dependent claims 3–15 and 17–20, which are argued for similar reasons as claims 1 and 16. Accordingly, we sustain the Examiner’s rejection of representative claim 1, as well as claims 3–21 grouped therewith, as being anticipated by Work.

² Notably, Appellants’ Reply Brief only addresses the rejection under 35 U.S.C. § 101, and not the rejection under 35 U.S.C. § 102. *See generally* Reply Br. 2–4. Although Appellants assert “the claims are . . . patentable over the cited art” (Reply Br. 4), this is not a separate argument on the merits, and in no way responds to the Examiner’s reliance upon column 9, lines 18–24 of Work.

CONCLUSION

The Examiner did not err in rejecting claims 1 and 3–21 based upon (1) claimed patent-ineligible subject matter under 35 U.S.C. § 101, and (2) obviousness under 35 U.S.C. § 103.

DECISION

For the above reasons, we sustain the Examiner's rejections of claims 1 and 3–21 under 35 U.S.C. §§ 101 and 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED